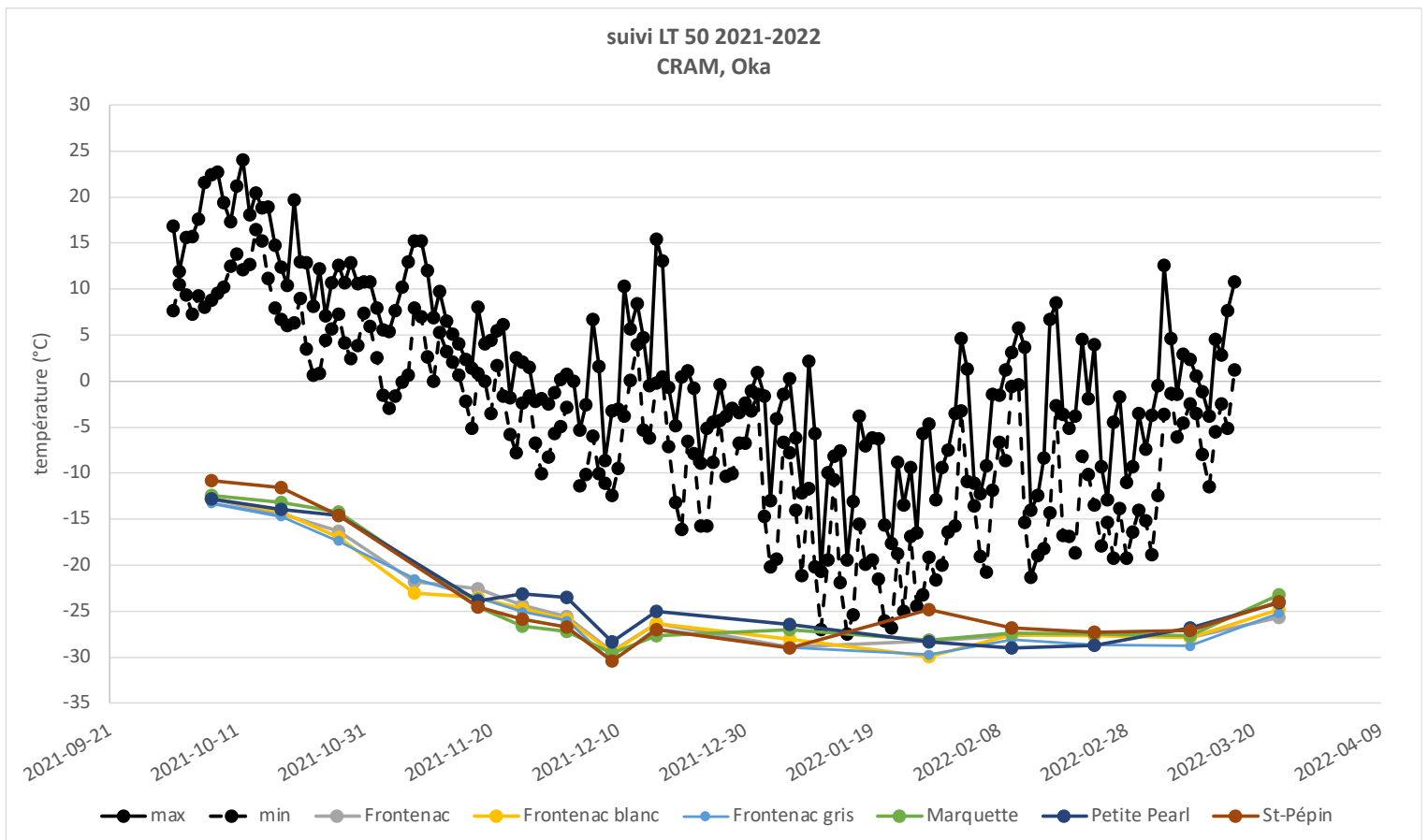


## Bud hardiness monitoring for the winter 2021-2022

### *Bulletin 10*

By Andréanne Hébert-Haché, Ph.D. candidate, Alexander Campbell, M.Sc. agr. and Caroline Provost, Ph.D

Field operations are beginning to ramp up for the 2022 season: pruning, dehilling, and removal of geotextiles for tender cultivars. As expected, we are beginning to observe vine deacclimation at each sampled site. The vines remain acclimated to cold temperatures. However, the rate of deacclimation will increase over the next month as the daily temperature increases. At this time, no dangerous cold event is expected during the next two weeks (for Oka).



### Acknowledgements

Funding for this project comes in part by the Science Clusters program funded by Agriculture and Agri-Food Canada, under the Viticulture and Oenology cluster. Financial support is also provided by the Conseil des vins du Québec as part of the scientific cluster

Tableau 1 : Lethal temperatures for cultivars across the province. LTE 10, LTE 50 and LTE 90 represent the lethal temperatures for 10%, 50% and 90% of the buds, respectively

région	MRC	cépage	LTE 10	LTE 50	LTE 90	LTE 10	LTE 50	LTE 90	LTE 10	LTE 50	LTE 90	LTE 10	LTE 50	LTE 90	LTE 10	LTE 50	LTE 90
Estrie	Memphrémagog	Frontenac	2022-01-18			2022-02-08			2022-02-22			2022-03-08			2022-03-22		
		Frontenac blanc	-25.76	-29.02	-31.35	-25.76	-28.95	-31.32	-25.65	-28.21	-30.61	-20.8	-26.68	-30.67	-21.97	-25.32	-27.75
Lanaudière	Joliette	Frontenac	-27.58	-30.54	-32.71	-24.77	-28.41	-30.65	-27.66	-30.32	-31.51	-25.04	-27.06	-29.29	-19.49	-24.43	-27.92
		Marquette				-15.94	-26.49	-32.14	-27.95	-32.1	-33.3	-27.95	-32.1	-33.3	-23.71	-28.42	-30.14
Lanaudière	D'Autray	Frontenac				-28.34	-32.41	-34.59	-28.89	-33.31	-34.97	-28.89	-33.31	-34.97	-28.02	-29.4	-31.21
		Frontenac blanc				-27.61	-31.43	-32.37	-31.31	-32.7	-34.36	-27.18	-28.6	-30.42	-26.92	-28.5	-30.17
		Frontenac gris				-24.89	-32.32	-33.83	-32.49	-33.46	-34.7	-27.52	-29.09	-30.17	-27	-28.73	-30.03
		Marquette				-24.63	-32.11	-33.65	-30.12	-33.53	-35.59	-27.59	-29.65	-31.06	-26.73	-28.5	-30.16
		Petite Pearl				-29.53	-31.15	-33.27	-28.11	-31.09	-32.66	-27.04	-29.06	-30.83	-24.69	-26.58	-28.4
Laurentides	Deux-Montagnes	St-Pépin	-29.89	-31.85	-33.59	-25.72	-30.42	-32.55	-24.76	-26.78	-28.93	-17.03	-24.75	-26.15			
		Frontenac	2022-01-28			2022-02-10			2022-02-23			2022-03-10			2022-03-24		
		Frontenac blanc	-21.76	-28.22	-30.07	-24.45	-27.67	-28.48	-25.89	-27.28	-28.74	-24.71	-27.88	-29.65	-20.34	-25.69	-27.36
		Frontenac gris	-24.59	-29.95	-32.25	-24.84	-27.58	-29.62	-26.11	-27.67	-29.13	-26.29	-27.82	-29.73	-22.5	-24.81	-26.17
		Marquette	-27.2	-29.75	-31.49	-25.86	-28.09	-30.07	-27.62	-28.69	-29.8	-26.84	-28.8	-29.98	-23.47	-25.21	-27.02
		Petite Pearl	-25.97	-28.13	-29.7	-23.57	-27.37	-28.76	-24.39	-27.48	-28.95	-25.43	-27.64	-28.94	-21.26	-23.25	-25.24
		St-Pépin	-16.5	-28.38	-31.53	-25.12	-29	-30.21	-26.96	-28.7	-30.35	-22.98	-26.82	-27.81	-20.76	-24.1	-26.36
		Seyval	-17.82	-24.86	-31.01	-24.7	-26.8	-28.58	-24.56	-27.25	-28.47	-25.1	-27.09	-28.48	-21.75	-23.94	-25.79
Vidal	sous toile			sous toile			sous toile			sous toile			sous toile				
Laurentides	Deux-Montagnes (Site 2)	Frontenac	2022-02-09			2022-03-09			2022-03-23								
		Marquette				-27.4	-29.66	-32.18				-26.99	-28.78	-29.99	-25.52	-27.32	-28.55
		St-Pépin				-29.27	-31.59	-33.02				-27.7	-28.79	-29.63	-25.49	-28.25	-29.76
Montérégie	Brome-Missisquoi	Frontenac	2022-01-18			2022-02-08			2022-02-22			2022-03-08			2022-03-22		
		Frontenac blanc	-29.27	-30.82	-32.72	-27.38	-29.11	-30.59	-27.63	-28.72	-30.35	-27.23	-28.67	-30.21	-23.73	-25.02	-26.64
		Frontenac gris	-29.23	-30.66	-32.26	-28.06	-30.24	-31.51	-27.69	-28.8	-29.89	-26.64	-27.6	-29.11	-22.27	-24.27	-26.5
		Petite Pearl	-27.16	-29.42	-30.93	-27.32	-28.63	-29.65	-25.18	-27.99	-29.79	-22.79	-24.89	-26.44			
Montérégie	Les Jardins-de-Napierville	Chardonnay	-28.05	-30.2	-31.9	-27.02	-29.24	-31.34	-25.43	-28.02	-29.3	-25.44	-28.25	-29.9	-23.41	-24.56	-26.09
		Frontenac	2022-02-15			2022-03-01			2022-03-15			2022-03-29					
		Frontenac blanc	-26.6	-30.43	-33.3	-30.49	-32.11	-34.28	-25.52	-27.79	-30.56	-22.04	-25.47	-27.71			
		Marquette	-31.5	-33.26	-34.89	-29.67	-31.85	-33.79	-27.31	-29.15	-30.96	-21.26	-26.12	-28.03			
		Petite Pearl	-29.19	-30.97	-32.57	-31	-32.6	-33.32	-27.46	-28.2	-29.71	-22.36	-24.45	-26.9			
Chardonnay	-29	-30.24	-32.09	-28.32	-30.5	-32.86	-24.47	-26.83	-28.12	-23.23	-25.04	-26.83					
Montérégie	Les Jardins-de-Napierville (site 2)	Chardonnay	sous toile			sous toile			sous toile			sous toile			sous toile		
		Pinot noir	sous toile			sous toile			sous toile			sous toile			sous toile		
		Pinot gris	sous toile			sous toile			sous toile			sous toile			sous toile		
		Vidal	sous toile			sous toile			sous toile			sous toile			sous toile		
		Seyval	sous toile			sous toile			sous toile			sous toile			sous toile		
Gamay	sous toile			sous toile			sous toile			sous toile			sous toile				

région	MRC	cépage	LTE 10	LTE 50	LTE 90	LTE 10	LTE 50	LTE 90	LTE 10	LTE 50	LTE 90	LTE 10	LTE 50	LTE 90	LTE 10	LTE 50	LTE 90
Montérégie	Le Haut-Richelieu	Marquette	-29.65	-32.1	-36.34	-29.01	-31.71	-32.83	-29.41	-31.52	-33.72	-24.64	-26.8	-29.23	-21.56	-23.05	-26.22
		St-Pépin	-29.31	-29.98	-32.51	-29.15	-30.45	-32.05	-28.37	-31.08	-33.62	-24.63	-27.27	-28.95	-18.45	-22.25	-25.14
Montérégie	Le Haut-St-Laurent (site 2)	Frontenac	-31.36	-32.57	-33.86	-26.62	-30.7	-31.91	-25.05	-30.67	-32.56	-24.78	-27.01	-28.45	-18.31	-24.1	-26.04
		Frontenac blanc	-27.71	-31.98	-33.93	-26.95	-30.67	-32.02	-26.55	-31.08	-33.42	-25.64	-27.08	-28.08	-19.54	-24.44	-26.7
		Marquette	-27.02	-30.31	-35.02	-27.79	-29.48	-31.25	-26.86	-30.08	-31.74	-24.72	-26.55	-27.96	-17.96	-20.06	-22.58
		Petite Pearl	-28.91	-30.94	-32.53	-24.15	-28.88	-30.5	-28.29	-30.79	-33.41	-25.72	-28.39	-30.41	-21.55	-24.02	-25.85
		St-Pépin	-27.81	-30.54	-32	-24.74	-28.52	-30.22	-27.17	-29.31	-32.11	-23.08	-25.41	-27.12	-19.11	-22.01	-24.05
Montérégie	Les Maskoutains	Pinot noir	sous toile			sous toile			sous toile			sous toile			sous toile		
		Gamaret	sous toile			sous toile			sous toile			sous toile			sous toile		
		Gamay	sous toile			sous toile			sous toile			sous toile			sous toile		
		Vidal	sous toile			sous toile			sous toile			sous toile			sous toile		
Montérégie	Marguerite d'Youville	Chardonnay	sous toile			sous toile			sous toile			sous toile			sous toile		
		Frontenac	-28.85	-32.35	-34.45	-26.36	-28.6	-30.61	-26.82	-28.04	-29.65	-26.6	-27.8	-29.24	-25.54	-26.91	-28.1
		Frontenac gris	-30.73	-32.04	-34.43	-26.08	-28.23	-29.58	-26.47	-28.15	-29.99	-24.61	-27.43	-29.03	-24.25	-26.22	-27.34
		Marquette	-30.08	-32.15	-33.28	-27.73	-29.53	-31.84	-27.07	-28.45	-29.4	-27.57	-28.96	-30.01	-24.39	-26.55	-27.57
		Pinot noir	sous toile			sous toile			sous toile			sous toile			sous toile		
		St-Pépin	-31	-33.43	-35	-27.18	-28.87	-29.7	-22.23	-27.87	-29.33	-25.48	-29.2	-30.51	-23.7	-26.24	-28.64
		Vidal	sous toile			sous toile			sous toile			sous toile			sous toile		
Montérégie	Rouville	Chardonnay	sous toile			sous toile			sous toile			sous toile			sous toile		
		Frontenac	-28.87	-31.87	-34.42	-28.27	-30.53	-32.36	-26.32	-28.52	-29.71	-24.74	-27.41	-28.88	-23.68	-25.75	-27.54
		Frontenac blanc	-31.22	-32.49	-33.77	-27.1	-29.07	-30.64	-26.7	-29.09	-30.62	-25.91	-27.09	-29.34	-24	-25.59	-26.79
		Frontenac gris	-29.62	-32.64	-35.59	-27.04	-29.69	-30.7	-27.02	-28.78	-31.07	-25.43	-27.39	-29.33	-24.25	-26.04	-28.4
		Marquette	-30.16	-31.91	-33.22	-28.92	-30.68	-32.14	-27.45	-29.99	-31.02	-27.39	-29.34	-31.39	-25.08	-26.3	-27.69
		Vidal	sous toile			sous toile			sous toile			sous toile			sous toile		
Montérégie	Vaudreuil-Soulanges	Frontenac	-31.01	-32.65	-33.16	-15.75	-23	-29.52				-23.93	-27.8	-28.78	-18.31	-26.75	-28.64
		Frontenac blanc	-28.34	-31.78	-33.58	-21.52	-28.56	-31.18				-25.94	-28.83	-30.28	-22.45	-27.3	-29.72
		Frontenac gris	-31.39	-32.51	-33.63	-21.08	-28.47	-30.88				-22.8	-27.78	-29.18	-25.86	-28.78	-30.13
		Marquette	-30.11	-32.31	-33.11	-26.35	-28.54	-30.61				-28.44	-30.03	-31.97	-26.31	-27.67	-29
		Petite Pearl	-25.84	-29.56	-32.36	-26.46	-28.6	-29.44				-24.19	-27.91	-30.49	-20.44	-24.41	-27.3
		St-Pépin	-31.2	-33.12	-34.23	-27.4	-28.93	-30.27				-26.47	-28.48	-30.11	-22.66	-24.93	-27.26